

REMARKS

Claims 15, 16 and 19-24 and 26-42 are currently pending. Claims 1-14, 17, 18 and 25 are canceled without prejudice or disclaimer. Claims 19-21, 29-33 and 37-40 are indicated as withdrawn. Applicants reserve the right to pursue the subject matter of any canceled or withdrawn claims in one or more continuing applications. Currently claims 15, 16, 22-24, 26-28, 34-36, 41 and 42 are presented for examined.

Claims 15, 28, and 34 are amended. Support for the amendments to each of these claims can be found in the claims and specification as originally filed. In particular, claim 15 is amended to incorporate the limitations of dependent claims 18 and 25, both of which are now canceled. Dependent claims 28 and 34 are amended to improve clarity. Accordingly, the current amendments do not constitute the addition of new matter.

Rejection of claims 15, 18, 22-28, 34-36, 41 and 42 under 35 U.S.C. § 112, second paragraph

The Examiner rejects claims 15, 18, 22-28, 34-36, 41 and 42 under 35 U.S.C. § 112, second paragraph as allegedly indefinite. In particular, the Examiner asserts that, to be clear, independent claim 15 must recite a means by which the genetic sequence encoding an antidote molecule is expressed.

Applicants submit that each of claims 15, 18, 22-28, 34-36, 41 and 42 are clear as originally presented; however, solely to expedite grant of the instant claims, Applicants have amended independent claim 15 to recite, in relevant part, that the genetic sequence encoding the antidote molecule is operably linked to a promoter.

In view of the foregoing amendment, Applicants request that the Examiner withdraw the above rejection of claims 15, 18, 22-28, 34-36, 41 and 42 under 35 U.S.C. § 112, second paragraph.

Rejection of claim 28 under 35 U.S.C. § 112, second paragraph

The Examiner rejects claim 28 under 35 U.S.C. § 112, second paragraph as allegedly lacking essential elements. In particular, the Examiner asserts that claim 28 must recite a specific nucleic acid that comprises a selectable marker. Furthermore, the Examiner questions whether the two different toxic genes must be different from a first toxic gene.

Applicants submit that claim 28 includes all necessary elements as originally presented; however, solely to expedite grant of the instant claims, Applicants have amended dependent claim 28 to recite, in relevant part, that the genetic construct comprising the genetic sequence encoding the poison protein is bordered by two different toxic genes. With respect to the question of whether the two different toxic genes are different from the first toxic gene, Applicants submit that the two different toxic genes can be each different from the first toxic gene, or alternatively, one of these toxic genes could be the same as the first toxic gene. In either case, the claimed method can be used to achieve the intended result. As such, the claim 28 does not lack an essential element.

In view of the foregoing remarks and amendment, Applicants request that the Examiner withdraw the above rejection of claim 28 under 35 U.S.C. § 112, second paragraph.

Rejection of claim 34 under 35 U.S.C. § 112, second paragraph

The Examiner rejects claim 34 under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. In particular, the Examiner asserts that claim 34 is unclear because it does not specifically recite on which nucleic acid construct or sequence the selectable marker is located.

Applicants submit that claim 34 is clear as originally presented; however, solely to expedite grant of the instant claims, Applicants have amended dependent claim 34 to recite, in relevant part, that the genetic construct comprising the genetic sequence encoding the poison protein further comprises a selectable marker.

In view of the foregoing amendment, Applicants request that the Examiner withdraw the above rejection of claim 34 under 35 U.S.C. § 112, second paragraph.

Rejection of claims 15, 16, 18, 22-28, 34-36, 41 and 42 under 35 U.S.C. § 103(a)

The Examiner rejects claims 15, 16, 18, 22-26, 34-36 and 41 under 35 U.S.C. § 103(a) as allegedly obvious over *Appl. Environ. Microbiol.* 66:5524-6, 2000 (Kristoffersen et al.) in view of *Biotechnol. Prog.* 12: 16-21, 1996 (Parekh et al.) and further in view of U.S. Patent No. 7,393,632 (Cheo et al.). Furthermore, the Examiner rejects claims 28 and 42 as allegedly obvious over the above-recited combination in view of Pecota et al. Finally, the Examiner rejects

claim 27 as allegedly obvious over the combination of Kristoffersen et al., Parekh et al, Cheo et al. and Pecota et al. in view of Newman et al. and in further view of Rochaix et al.

With respect to claims 15, 16, 22-26, 34-36 and 41, the Examiner asserts that Kristoffersen et al. disclose introduction of genetic sequences encoding poison and antidote proteins into yeast. The Examiner acknowledges that Kristoffersen et al. do not disclose integration of the sequence encoding the poison protein into the yeast genome. The Examiner, however, asserts that Parekh et al. disclose yeast integrative vectors. Next, the Examiner alleges that Cheo et al. disclose the remaining elements of independent claim 15 and many others of the above-rejected claims. In particular, the Examiner alleges that Cheo et al. disclose recombination of three or more nucleic acids using selectable markers, at least one of which encodes a poison protein. Furthermore, the Examiner alleges that Cheo et al. discloses vectors for recombination that include two selectable markers flanked by regions allowing homologous recombination and that homologous recombination can lead to cessation of the toxic activity of the poison protein. Finally, the Examiner asserts that Cheo et al. disclose that the target nucleic acid to be replaced can be in the genome. The Examiner then contends that a skilled artisan would find it obvious to arrange this disparate array of elements to arrive at the subject matter recited in claims 15, 16, 22-26, 34-36 and 41. Applicants do not agree.

Applicants submit that each of the above-rejected claims is nonobvious over the art of record. In particular, none of the references cited by the Examiner, alone or in combination, teach or suggest incorporating a nucleic acid encoding a poison protein into the genome of a cell as recited in independent claim 15. In addition, none of the references cited by the Examiner, alone or in combination, teach or suggest that a genetic sequence, which is the target of the poison protein or which encodes the target of the poison protein, is present in the genome of the cell as recited in independent claim 15. As such, independent claim 15 is not rendered obvious by any combination of the art of record.

With respect to claims 27, 28 and 42, the Examiner cites numerous additional references that allegedly disclose the elements set forth in these claims. Applicants submit, however, that not of these additional references teach or suggest the elements missing from independent claim 15 as discussed above. As such, none of the dependent claims 27, 28 and 42 are rendered obvious by the art of record since they each depend from claim 15.

In view of the foregoing remarks and amendments, Applicants respectfully request that the Examiner withdraw the rejection of claims 15, 16, 18, 22-28, 34-36, 41 and 42 under 35 U.S.C. § 103(a).

Provisional rejection of claims 15, 16, 18, 22-24, 26 and 35 under the doctrine of obviousness-type double patenting

The Examiner provisionally rejects claims 15, 16, 18, 22-24, 26 and 35 under the judicially created doctrine of obviousness-type double patenting. In particular, the Examiner alleges that these claims are not patentably distinct from claims 1-3, 9-10, 13-16 and 22 of U.S. Patent Application No. 11/558,856 (the '856 application).

Applicants submit that claims 15, 16, 18, 22-24, 26 and 35 are patentably distinct from the claims 1-3, 9-10, 13-16 and 22 of the '856 application. In particular, these claims of the '856 application do not teach or suggest a cell comprising both a genetic construct incorporated in the genome of a cell and an additional construct as recited in amended claim 15. Accordingly, claims 15, 16, 18, 22-24, 26, 35 and 36 are patentably distinct from the claims of the '856 application.

Additionally, Applicants would like to bring to the Examiner's attention that the '856 application issued as U.S. Patent No. 7,595,185 on September 29, 2009.

In view of the foregoing remarks, Applicants respectfully request that the Examiner withdraw the rejection of claims 15, 16, 18, 22-24, 26 and 35 as obvious in view of the claims of the '856 application.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, the Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. The Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior

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prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that the Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

CONCLUSION


Applicants believe that all outstanding issues in this case have been resolved and that the present claims are in condition for allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is invited to contact the undersigned at the telephone number provided below in order to expedite the resolution of such issues.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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